IB Physics 2 at B-CC

August 2011-May 2012

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Course Description

IB Physics is a two-year, rigorous, algebra-based course covering many topics in physics. Physics is fundamental to understanding natural phenomena and vital to the development of technology. Through a variety of methods we strive to nurture independent learning with emphasis placed on synthesizing concepts in order to solve complex problems. The course meets daily, and includes an average of 3 homework assignments per week.

IB Mission Statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end, the organization works with schools, governments and international organizations to develop challenging programs of international education and rigorous assessment. These programs encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

MCPS Grades will be determined as follows:

Tests, Lab Reports, and Projects	(Summative Assignments)	60%
Quizzes	(Formative Assignments)	30%
Homework		10%

Grades for the Marking Period

A	B	C	D	E
89.5 – 100	79.4 – 89.5	69.4 – 79.5	59.5 – 69.4	< 59.5

IB Exam & IB Grade

It is expected that <u>all</u> students in this course will take the IB Physics Exam in May 2012. If you do not plan to take the exam, please talk to Mrs. Tsavaris or Ms. Groeneman early in the school year. There is a cost associated with the exam. However, there are fee waivers available for those who qualify. Students will receive an IB score from 1-7 for the course based on the exam score as well as Internal Assessments and the Group 4 Project which will be worked on throughout the year. High IB scores may earn students college credit and placement, depending on the college. For example, the University of Maryland awards 8 credits for an IB Physics score of 5,6, or 7.

Grading Procedures, the 50% Rule, and Late Work

1. Student learning will be assessed in a variety of ways and grades will reflect what a student knows and is able to do within the curriculum.

2. When using percentages, teachers will assign a grade no lower than 50% to a task/assessment <u>that meets minimum standards</u>. The teacher will determine whether an assignment has met minimum standards to qualify for 50% credit.

3. Teachers will establish due dates and deadlines.

a. Work turned in after the due date and prior to the deadline may be dropped no more than one letter grade or 10% of the grade.

b. Work not attempted (not submitted by the deadline) or work involving academic dishonesty (see Student Handbook) will be recorded as a zero.

Homework: Homework is an ***essential*** part of a rigorous instructional cycle that promotes student learning and prepares students for instruction and assessments. Homework will be graded on the basis of completion only. A serious effort, as judged by the teacher, will be the basis for determining assignment completeness.

Assistance & TAP
All students are welcome and encouraged to seek help from teachers outside of class during the semester. By doing so, the student may learn strategies that will help them use their time more effectively. Often 15 minutes with a teacher after-school is more effective than spending 3 hours on one homework problem late at night.

Any student needing IB Physics assistance may find either Mr. Jacobs in room A-218 or Mrs. Tsavaris in B-226. We are available nearly every day during lunch and after school. Often, the best thing to do is to pre-arrange a meeting with one of us to ensure that we will be there when you come.

Time for Academic Progress (**TAP**) is another great resource for students. TAP is run by B-CC science teachers who are familiar with all science courses at B-CC. Additionally, students can often work together on problems at TAP. Sometimes peer-to-peer instruction can be more effective than listening to a lecture.
TAP meets on Tuesdays, Wednesdays, and Thursdays after-school until 3:15 p.m. in Room B-313.

Reteaching & Reassessments: Reteaching and reassessment are an integral part of the instructional cycle and offer additional opportunities for students to learn and demonstrate learning.

1. In general, only quizzes may be re-assessed. It is MCPS policy that summative tests are never re-assessed. There will be a limit of one re-quiz per quiz assignment. If a student wishes to retake a quiz, that student must complete the re-quiz within **three days** of getting the original quiz back. After this point, the student will be stuck with the original grade.
2. Attendance at a re-teaching session, completion of a re-teaching assignment, and/or attendance at TAP may be required in order to earn the privilege of re-assessing a quiz.
3. Reassessments will usually take place after-school or at lunch, not during regular class time.
4. The reassessment grade replaces the original grade, even if the second grade is lower.
5. To be considered eligible for a re-assessment, a student must have **no outstanding assignments** for the quarter.

Attendance & Make-up Work
Your attendance in class is critical to your success in this course. You are expected to attend class every school day. Unexcused tardies or absences will result in consequences such as lunch detentions. See the B-CC Attendance Policy for more details on these consequences.

All missed assignments must be made up, including laboratory assignments. If a student is absent from school, it is the students responsibility to promptly communicate with the teacher outside of class to determine what assignments the students needs to make up, and the due date for those make-up assignments. Students should meet with their teachers within 1-2 days of returning to school in order to be able to make up these assignments for credit. Students have **three days** to make-up missing assignments upon returning to school from an excused absence. If you miss work due to an unexcused absence, you will receive no credit for that assignment.

Academic Integrity
Each student is expected to complete and present work that represents their individual effort. Academic dishonesty will not be tolerated and will result in a grade of zero.
Copying a lab report from a lab partner is never acceptable.

Topics to be covered this year

MP1 (August – October 2010)
Review Core Topic 1 – Measurement
Review Core Topic 2 – Mechanics
Review Core Topic 3 – Thermal Physics
NEW Core Topic 4 – Simple Harmonic Motion
Review Core Topic 5 – Electric Currents

MP2 (November 2010 – January 2011)

Review Core Topic 6 – Gravitational and Electric Fields
NEW Core Topic 7 – Atomic Physics
NEW Core Topic 8 – Climate Change
Review AHL Topic 9 – Motion In Fields; Projectile, Orbits, Electric Fields

MP3 (January – March 2011)

NEW AHL Topic 10 – Thermodynamics
Review AHL Topic 11 – Waves
Review AHL Topic 12 – Electromagnetic Induction
NEW AHL Topic 13 – Quantum Physics
NEW AHL Topic 14 – Digital Technology

MP4 (April – May 2011)
Review HL Option G – Electromagnetic Waves (?)
NEW HL Option H – Relativity (?)
Comprehensive Review for IB Physics Exam